2. A [In a] method for making an absorbent article [improving absorbency of pulps and increasing yields thereof the improvement] said method comprising:

subjecting a pulp fiber suspension at a temperature of less than about 45°C, in a fiber suspension from about 2% up to about 25% consistency, to a caustic solution of a concentration of about 5% to 25% by weight for a time sufficient to improve the absorbency characteristics of a pulp material resulting from such treatment, said pulp material containing pulp fibers;

recovering said pulp material from the suspension;

drying said pulp material;

fluffing the dried material; and

incorporating the pulp material in an absorbent inner structure of an absorbent article, said article having a fluid permeable cover sheet over said absorbent inner structure.

3. A [In a] process for making an absorbent article [improving pulp properties of pulps useful as fluff pulps the improvement] said process comprising:

subjecting a pulp fiber suspension at a temperature of less than about 45°C, in a fiber suspension from about 2% up to about 25% consistency, to a caustic solution of a concentration of about 5% to 25% by weight for a time sufficient to improve the absorbency characteristics of a pulp material resulting from such treatment, said pulp material containing pulp fibers;

recovering and drying said pulp fibers from said suspension;

fluffing said dried pulp fibers; and

forming an absorbent article comprising an absorbent interior and a fluid permeable exterior comprising a fluid permeable coversheet, said fluffed pulp fibers being incorporated in said absorbent interior.

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10. A [In a] process for making an absorbent article, [improving the fast absorbency characteristics of a pulp useful in absorbency intensive applications the improvement] said process comprising:

treating pulp at a temperature of less than about 40°C in a suspension with a caustic solution of a concentration from about 13% to about 18% by weight, [said concentration being dependent on the amount of lignin remaining in the pulp, as measured by the K number and a severity of pulping of said pulp,] for a treatment of time sufficient to obtain a pulp of improved absorbency, said treated pulp containing pulp fibers, and

recovering the thus treated pulp from said suspension [suitable for intensive absorbency and fluff pulp use applications];

drying the recovered pulp;

fluffing the dried pulp; and

forming an absorbent article having an absorbent interior and a fluid permeable coversheet, said fluffed pulp being incorporated in the absorbent interior.

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16. The process as defined in Claim 10, wherein said [absorbency intensive application is for an acquisition layer] absorbent article is [for] a baby diaper having a fluid barrier sheet,

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the fluid permeable coversheet and the fluid barrier sheet being on opposing sides of the absorbent interior of the absorbent article.

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25. A [In a] process of constructing an absorbent device having an outer acquisition layer and an inner absorbent core element, the [improved] process comprising:

pulping a pulp source starting material to a preselected K number of at least about 8 [and above] to obtain a pulp with substantially said K number [and wherein said pulp is optionally bleached];

treating said pulp at a temperature of less than about 45°C in a suspension with a caustic solution of a concentration from about 5% to about 25% by weight, with a treatment time sufficient to obtain a pulp of improved absorbency values containing pulp fibers and suitable for absorbency applications in said absorbent device, and recovering thus treated pulp from said suspension [suitable for absorbency applications in said device];

sheeting and drying said pulp into a sheet of a basis weight from 200 to 800 grams per meter squared; and

incorporating [converting] said sheet [to] in said absorbent device as a core element of the device or as an outer layer for said absorbent device [diaper] on at least one surface of a core element of said device [or a core element for said device].

26. The process as defined in Claim 25, wherein the sheet is incorporated in said core element and [is composed at least in part of improved absorbency] the pulp [obtained as defined in Claim 25] is derived from Southern pine pulp.

27. The process as defined in Claim 25, wherein the device is configured for use as a baby diaper.

28. The process as defined in Claim 25, wherein the device is configured for use as a catamenial device.

29. The process as defined in Claim 25, wherein the device is configured for use as an incontinence device.

33. An [improved pulp for an] absorbent device made by the process of Claim 10, and said absorbent interior being comprised of [at least] an acquisition layer element which [wherein said layer] is of [a] the pulp [as defined in Claim 10].

34. An absorbent device [improved absorbency material comprised of a] comprising cellulosic fibrous material [wherein said cellulosic fibrous material has been] obtained by the process of pulping a cellulosic source material which has an unbleached pulp K number of at least 12; and treating said pulped cellulosic material with [wherein said cellulosic fibrous material is] a cold caustic solution [treated material] at a treatment temperature of less than 40°C, in a suspension of 2% to 15%, [with] said cold caustic solution being at a concentration of from about 5% to 25% by weight; recovering said caustic treated cellulosic material; drying said recovered cellulosic material; and fluffing said dried cellulosic material.

35. The absorbent device [improved absorbency material] as defined in Claim 34 wherein the cellulosic fibrous material subsequent to cold caustic treatment has been mechanically treated.

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36. The absorbent device [improved absorbency material] as defined in Claim 34 wherein the cellulosic fibrous material subsequent to cold caustic treatment has been beaten.

37. The absorbent device [improved absorbency material] as defined in Claim 34 wherein the unbleached pulp has a K number of [for same is] at least about 20 [above].

38. The absorbent device [improved absorbency material] as defined in Claim 34 [above] wherein the [same is incorporated into] device is configured for use as a baby diaper, a catamenial device, or an incontinence device[, a towel or a tissue in sheet form].

39. A [In a] process for making an absorbent device, [improving the absorbency of a cellulosic material in a fibrous form of said cellulosic material wherein said material is useful in absorbency applications, the improvement] said process comprising:

treating a [said] cellulosic material at a temperature of less than about 45°C, in suspension, with a caustic solution of a concentration from about 5% to about 10% by weight, said concentration being dependent on the process employed, wood species used and/or on the amount of lignin remaining in said cellulosic material as measured by a K number measurement,

wherein said caustic solution is in contact with said cellulosic material for a treatment time sufficient to obtain a cellulosic material of improved absorbency values, and containing pulp fibers, and

recovering thus treated cellulosic material from said suspension [suitable for absorbency applications];

drying the recovered cellulosic material;

fluffing the dried cellulosic material; and

incorporating the fluffed cellulosic material in an absorbent article, said article having an absorbent interior containing the fluffed pulp and a fluid permeable outer sheet over the absorbent interior.

Please add the following new claims:

44. The process of claim 1, wherein said treated pulp maintains its improved absorbency characteristics upon rewetting.

45. The process of claim 2, wherein said treated pulp maintains its improved absorbency characteristics upon rewetting.

46. The process of claim 3, wherein said treated pulp maintains its improved absorbency characteristics upon rewetting.

47. A process for making an absorbent article, said process comprising:

(a) creating a suspension of about 2% to about 25% by weight cellulosic pulp in an alkali solution having an alkali concentration from about 5% to about 25% by weight and a temperature of up to about 50°C;

(b) maintaining said cellulosic pulp in said suspension for a treatment time between about 2 to about 10 minutes to obtain a cold caustic extracted pulp of improved absorbency characteristics containing pulp fibers; and

(c) recovering said cold caustic extracted pulp from said suspension to obtain a high absorbency pulp;

(d) drying said high absorbency pulp;

(e) fluffing said high absorbency pulp; and

(f) incorporating the high absorbency pulp in an absorbent article, said article having an absorbent interior containing the fluffed pulp and a fluid permeable outer sheet over the absorbent interior.

48. The process of claim 47, wherein the absorbent article has an impermeable barrier sheet on a side of the absorbent interior opposite to the fluid permeable sheet.

49. A process for making an absorbent article, said process comprising the steps of:

(a) creating a suspension of about 2% to about 25% by weight cellulosic pulp in an alkali solution having an alkali concentration from about 2% to about 25% by weight and a temperature of up to about 40°C;

(b) maintaining said cellulosic pulp in said suspension for a treatment time between about 5 minutes to about 1 hour to obtain a cold caustic extracted pulp of improved absorbency characteristics containing pulp fibers;

(c) recovering said cold caustic extracted pulp from said suspension thereby obtaining a high absorbency pulp for intensive absorbency and fluff pulp applications;

(d) drying said high absorbency pulp;

(e) fluffing said high absorbency pulp; and

(f) incorporating the high absorbency pulp in an absorbent article, said article having an absorbent interior containing the fluffed pulp and a fluid permeable outer sheet over the absorbent interior.

50. The process of claim 49, wherein the absorbent article has an impermeable barrier sheet on a side of the absorbent interior opposite to the fluid permeable sheet.

51. The process of claim 1, said absorbent article being formed with a fluid impermeable barrier on a side of the absorbent article opposite the fluid permeable coversheet.

52. The process of claim 2, said absorbent article being formed with a fluid impermeable barrier on a side of the absorbent article opposite the fluid permeable coversheet.

53. The process of claim 3, said absorbent article being formed with a fluid impermeable barrier on a side of the absorbent interior opposite the fluid permeable coversheet.

54. The process of claim 25, and said device having a fluid permeable topsheet adjacent the outer layer of the diaper.

55. The process of claim 54, and said device having an impermeable barrier sheet adjacent a side of the absorbent core opposite to the topsheet.

56. The absorbent device of claim 34, said device further comprising a fluid impermeable barrier under said material.

57. The process of claim 39, said absorbent article being formed with a fluid impermeable barrier on a side of the absorbent article opposite the fluid permeable coversheet.

58. A method for making an absorbent composite useful for personal hygiene articles which comprises:

treating a wood fiber pulp containing wood fibers with a base at a temperature ranging from about 0° C. to about 60° C. thereby forming a treated wood fiber pulp containing wood fibers;

forming the treated wood fiber pulp into an absorbent sublayer material comprised of the base-treated wood pulp;

providing at least one fluid permeable topsheet layer; and

placing the sublayer material below the topsheet layer.

59. The method of Claim 58, said forming step including

dry shredding the treated wood fiber pulp so that the absorbent sublayer material formed is comprised of shredded base-treated wood pulp.

60. The method of Claim 59, and further comprising

providing at least one substantially fluid impermeable backsheet layer below the sublayer material.

61. A method for making an absorbent composite useful for personal hygiene articles which comprises:

treating a wood fiber pulp containing wood fibers with a base at a temperature ranging from about 0° C. to about 60° C. thereby forming a treated wood fiber pulp containing wood fibers;

dry shredding the treated wood fiber pulp to form an absorbent sublayer material comprised of shredded base-treated wood pulp;

providing at least one fluid permeable topsheet layer and at least one substantially fluid impermeable backsheet layer; and

interposing the sublayer material between the topsheet layer and the backsheet layer.

62. The method of claim 61 wherein the sublayer material contains from about 25 to about 100% by weight of treated cellulosic fiber pulp and from about 0 to about 75% by weight of unprocessed fibers.

63. The method of claim 61 wherein the sublayer material is further characterized as having a strike-through acquisition re-wet weight of less than about 40 grams.

64. The method of claim 61 wherein the sublayer material has a pre-poured saturated drainage (PSD) capacity greater than about 400 mL.

65. The method of claim 61 further comprising connecting at least a portion of the topsheet layer to at least a portion of the backsheet layer so as to define a closed space between the layers containing the sublayer.

REMARKS

1. Expected Interference

Claims 61 to 65 of the present preliminary amendment have been essentially copied from the claims of U.S. Patent 5,766,159 issued June 16, 1999, to Martin et al, a copy of which is submitted herewith. The main difference is that claims 61 to 65 recite treatment below 60°C, while the Martin patent recites treatment below 80°C, and claim 62 recites different percentages from those of the Martin patent.